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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/613,603	07/03/2003	Kerry Johnson	6009-4599US1	7282

7590

05/14/2004

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EXAMINER

MENON, KRISHNAN S

ART UNIT	PAPER NUMBER
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1723

DATE MAILED: 05/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary	Application No. 10/613,603	Applicant(s) JOHNSON ET AL.	
	Examiner Krishnan S Menon	Art Unit 1723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 24-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 24-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 1 and 24-31 are pending after the preliminary amendment.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 24-31 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hindstrom et al (US 4,981,589).

Hindstrom teaches a filter element as recited in claim 1 comprising ceramic internal layer having hollow recesses (figure 1 and 3 – see recess 10), having a continuous ceramic microporous layer (1) having pore size under 5 microns (see claim 1) surrounding and supported by a ceramic internal layer (2). The two layers are separately sintered (col 3 lines 64 – col 4 line 15. Please note: sinter = to cause to become coherent mass by heating, Webster's collegiate dictionary, 10th ed.). However, the limitation 'separately sintered' is a process limitation. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior

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product was made by a different process.” In re *Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Re the newly added limitations to claim 1 “ .. recess areas ... opening only to one end ...” and “... microporous surface layer surrounding ... in all regions except where the substrate is in contact with the capillary suction dryer”: Figure 1 of Hindstrom teaches that the recess areas open only to one end. The embodiment of Figure 3 is also described as “suction filter”, it is formed by dipping the extruded ‘second layer’ and then the first filter layer material is allowed to adhere on to the second layer by submerging in a slurry of the first layer material (col 1 lines 54-62; col 2 lines 30-38; col 4 lines 46-54), and this process would provide a uniform coat of first filter layer all around the filter, except at the suction port. Figure 3 depicts the filter layer as formed all around in cross section. Figure 1 teaches a cross section of the filter through a recess 10, which does not imply that there is only a single recess 10. Nowhere in the reference does it state that the Figure 1 construction has only one (single) hollow recess.

Microporous layer is made of alumina as in claim 24 and 25, and made from a polymer (see polyacrylates in the tables in col 3) as in claim 26. Filter element is unitary, without the use of glue as in claim 30, and is provided with fitting area for fitting to the drier, fitting area formed by a recess specially adapted to mate with the suction drier as in claim 31(fig 1, col 4 lines 22-39).

Claim 27-29 recite result effective variables: recess area volume adapted to optimize flow in claim 27, optimum bulk volume ratio in claim 28, and optimum void volume ratio in claim 29. Discovery of an optimum value of a result effective variable in

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a known process is ordinarily within the skill of the art. In re Boesch and Slaney, 205 USPQ 215 (CCPA 1980); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Aller, 42 CCPA 824, 220 F.2d 454, 105 USPQ 233 (1955).

Response to Arguments

Applicant's arguments filed 4/16/04 have been fully considered but they are not persuasive.

Applicants' arguments are directed at the newly added limitations in claim 1.

Applicant puts forth the following arguments re Figure 1 of the reference: As *such, this embodiment of Hindström cannot teach or suggest that least two hollow recess areas for liquid flow," as recited in Claim 1, as amended. This embodiment also does not teach or suggest "recess areas extending along a longitudinal axis of the filter element opening only to one end of the filter element," or "the microporous surface layer surrounding the ceramic internal layer, in all regions except where the substrate is in contact with the capillary suction dryer,"*. In response, nowhere in the reference does it say that figure 1 has only one (single) hollow recess. Figure 1 depicts cross section through a hollow recess 10. It also depicts as opening only to one end, the other end being cut away from the detail. The reference does not say that the recess is not longitudinal; and one of ordinary skill in the art would readily recognize the longitudinal direction is the direction of flow. The microporous surface layer of this embodiment would surround all regions except the suction opening because of the method of making by dipping in the slurry of the filter layer material as pointed out in the rejection.

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Re figure 3, applicant argues: *"Being extruded, this plate must have a constant cross-section (illustrated in Figure 3). Accordingly, these suction spaces must necessarily pass from one end of the plate to the opposite end. As such, this embodiment of Hindström cannot teach or suggest "recess areas extending along a longitudinal axis of the filter element opening only to one end of the filter element"* Further, the embodiment of Figure 3 of Hindström does not teach or suggest *"the microporous surface layer surrounding the ceramic internal layer, in all regions except where the substrate is in contact with the capillary suction dryer"* particularly because of *the aforementioned second end formed with open recess due to the extrusion process."*

In response, in the embodiment of figure 3, the second layer is formed by extrusion, and the first layer is described as being deposited by dipping in the slurry of the material for the surface layer (see the rejection). Therefore, it would be formed all around excluding the suction port. Re the suction port, there is no teaching or suggestion in the reference that the recess area cannot be open to just one end, and one of ordinary skill in the art would recognize that the suction port of the embodiment in Fig 3 could be just on end, as shown in Fig 3.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Krishnan S Menon whose telephone number is 571-272-1143. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda L Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Krishnan Menon
Patent Examiner


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